

REMARKS

The present invention is directed to a pressure sensitive adhesive composition which comprises oxyalkylene polymer (A), tackifier resin (B) and curing catalyst (C).

Concerning component (A), the number average molecular weight is 15,000 to 100,000, whereby good pressure sensitive adhesion characteristics are provided (see page 3, line 29 to page 4, line 3).

Further, the polymer contains a hydrolyzable silyl group, and is obtained by introducing into the molecules 0.3 to 0.7 equivalent of a hydrolyzable silyl group relative to the total amount of the functional groups in a precursor which allows introduction of the hydrolyzable silyl group. Thus good pressure sensitive adhesive properties can be obtained (see page 7, lines 8 to 17 in the specification).

In the Office Action of May 7, 2008, claims 1, 3, 4, and 7 were rejected under 35 U.S.C. § 102(b) based on U.S. Patent 4,463,115 (Hirose et al), and claims 2, 5, and 6 were rejected under 35 U.S.C. § 103(a) based on Hirose et al further in view of Ueda et al.

In this Amendment, Applicant has included new claim 8, directed to a preferred embodiment of the invention. Claim 8 is supported, e.g., by page 3, lines 29 - 30 of the specification.

Applicant respectfully submits that the presently claimed invention is not anticipated, and is non-obvious, for reasons explained in detail below. Accordingly, Applicant respectfully submits that the presently claimed invention is patentable over the cited art.

The effect of the present invention is especially clear from Table 3 (see page 18) of the present application. Table 3 shows the adhesion retention of the compositions after application to the curved surface. The composition of Example 1 showed an excellent adhesive strength, whereas Comparative Examples 1 and 2 totally failed or failed to provide adhesion for more than 10 minutes.

U.S. Patent 4,463,115 (Hirose et al) is directed to a pressure sensitive adhesive composition comprising (A) a polyether having at least one silicon-containing hydrolyzable group and (B) a tackifier. Hirose et al corresponds to a background art (Japanese Kokai Publication Sho59-71377) described in the present specification (see page 1, line 19 to page 2, line 5 of the specification).

The Examiner cited Reference Example 3 of Hirose et al which teaches that 55% of the end groups of the alkylene oxide polymer have methyldimethoxysilyl group.

In Reference Example 1 of Hirose et al, the propylene oxide polymer having an average molecular weight of 8,000 (column 5, lines 11 to 12 of Hirose et al) was reacted with methyldimethoxysilane to obtain an alkylene oxide polymer having an average molecular weight

of 8,200 (see column 5, lines 34 to 35 of Hirose et al). Here, 82% of the end groups of the alkylene oxide polymer have methyldimethoxysilyl group.

Reference Example 3 uses propylene oxide polymer obtained in Reference Example 1. Judging from the explanation of Reference Examples 1 and 3, the average molecular weight of the alkylene oxide polymer obtained in Reference Example 3 is approximately 8,000, which is much smaller than 15,000. Therefore, the alkylene oxide polymer of Hirose et al does not correspond at all to the oxyalkylene polymer (A) of the presently claimed invention.

The alkylene oxide polymers of Reference Examples 1 and 2 do not correspond to the oxyalkylene polymer (A) of the presently claimed invention, either. That is, those polymers do not have a molecular weight of 15,000 to 100,000.

Furthermore, the alkylene oxide polymer of Reference Example 3 is used to prepare the comparative pressure sensitive adhesive product which does not contain tackifier (Comparative Example). The comparative pressure sensitive adhesive product does not correspond to the pressure sensitive adhesive composition of the presently claimed invention.

As discussed above, Hirose et al is silent regarding an oxyalkylene polymer which has a number average molecular weight of 15,000 to 100,000 and is obtained by introducing, into each molecule, 0.3 to 0.7 equivalent of a hydrolyzable silyl group relative to the total amount of the functional groups in a precursor which allow introduction of the hydrolyzable silyl group.

Hirose et al is also silent about a composition comprising such an oxyalkylene polymer, a tackifier resin, and a curing catalyst.

As explained in the specification of the present application (see page 1, line 32 to page 2, line 1), the pressure sensitive adhesive compositions of Hirose et al are unsatisfactory in characteristics required of pressure sensitive adhesives, for example, in adhesive strength and holding ability upon sticking to curved surfaces. The effect of the present invention is unexpected from Hirose et al.

Hirose et al teaches that an average molecular weight of the polyether is 3,000 to 15,000 (column 3, lines 3 to 6). From the teachings of Hirose et al, those skilled in the art would have no motivation or reason to attain the present invention.

Accordingly, it is respectfully submitted that the present invention is neither anticipated by nor obvious over Hirose et al.

WO 03/035755 (Ueda et al) is directed to a curable resin composition comprising (A) oxyalkylene polymer having a silicon-containing functional group; (B) a copolymer having a silicon-containing functional group; and (C) a curing accelerator.

However, Ueda et al is silent regarding an oxyalkylene polymer which has a number average molecular weight of 15,000 to 100,000, and that is obtained by introducing into the

molecules 0.3 to 0.7 equivalent of a hydrolyzable silyl group relative to the total amount of the functional groups in a precursor which allows introduction of the hydrolyzable silyl group.


It is thus clear that Ueda et al does not remedy the deficiencies of Hirose et al. Therefore, the presently claimed invention is not rendered obvious even by the combination of Hirose et al and Ueda et al.

In view of the above, reconsideration and allowance of pending claims 1 - 8 of this application are now submitted to be in order, and such actions are hereby earnestly solicited.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the local Washington, D.C. telephone number listed below.

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